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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,173	09/19/2000	Takamitsu Shimada		4815
22428	7590	04/21/2004		
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER REITZ, KARL	
			ART UNIT 2624	PAPER NUMBER 7
DATE MAILED: 04/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)
	09/665,173	SHIMADA ET AL.
	Examiner	Art Unit
	Karl R. Reitz	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 September 2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 September 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first control means and the second control means of claims 1 and 3 must be shown or the feature(s) canceled from the claims. In the case of the control means, it seems the CPU would perform the 70 (of figure 4) would perform the operation of both. No new matter should be entered.

3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 5-6, 11-12, 14-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry (5,859,711) in view of Sumita (JP 10126547).

6. In accordance with claims 1, 3 and 15, Barry discloses an image output system with multiple output apparatuses 16 connected to a personal computer 10 via a Ethernet connection, in which a first output apparatus for outputting a monochromatic image 16, a second output apparatus for outputting a color image 16 (col. 10 lines 34-38) and a controller 14 for controlling image outputs of said output apparatus are connected (col. 4 lines 28-42), as shown in figure 1; in Barry's system, each of the printers, all indicated by the reference sign 16, can be either black and white or color engines (col. 10 lines 34-38).

7. Barry further discloses that the controller 14 contains reception means for receiving a print job; in Barry's system, the distributor 14 receives a print job from the workstations 10 via the network interface 12 (col. 4 lines 30-35).

8. Barry further discloses that the controller 14 contains first control means for controlling image outputs by distributing monochromatic pages to one or more of the output apparatuses for outputting monochromatic images and color pages to one or more of the output apparatuses for outputting color images where the monochromatic pages and color pages are mixed in the print job received by the reception means; in Barry's system, black and white printers are used to print the black and white images and color printers are used to print the color images (col. 10 lines 10-19).

9. Barry further discloses that color printing apparatuses can switch to print monochromatic images; in table 2 (col. 12 line 1) all the engines (1-4) are used to print a job containing 6 pages, where pages 1, 3 and 5 are black and pages 2, 4 and 6 are

color (col. 11 lines 33-34), as shown in the table each engine prints both color pages and black and white pages.

10. However, Barry does not discloses expressly that the controller 14 has a second control means to switch to an output mode of the color imaging apparatuses to a monochromatic image output mode when the image output of the color pages from the second output apparatus has been complete by the control of the first control means, and distributing remaining monochromatic pages to the color imaging apparatuses switched to the monochromatic image output mode and to the monochromatic imaging apparatus, in accordance with speeds of the output apparatus.

11. Sumita discloses a system with two printing apparatuses, in which when two output apparatuses are printing a print job. If the first apparatus finishes printing, it is checked whether or not the second apparatus has more than one image left to output, if so the remaining portion of the job is shared between the two devices to increase printing speed (solution portion of the abstract).

12. Barry and Sumita are combinable because they are from the same field of endeavor, namely sharing print processing between multiple printing apparatuses.

13. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to use Barry's system with color and monochromatic imaging apparatuses, and allow the color imaging apparatuses to print some of the black and white images if the color images are finished being printed, as disclosed by Sumita.

14. The motivation for doing so would have been to output the print job in the fastest possible manner, by most efficiently distributing the print job.

15. In accordance with claim 11, the apparatus of claim 3 performs the method of claim 11. The reception, first control and second control means of claim 3, as described above, perform the instructing, first distribution and second distribution steps of claim 11, respectively.

16. In accordance with claim 2, Barry discloses the duplex printing is performed in a non-division manner (col. 18 lines 53-63). Further, it would be obvious to a person of ordinary skill in the art, that duplex printing would be performed in a non-division manner, since the nature of duplex printing requires two images to be formed on the same sheet, those two images would be sent to the same output apparatus. If the images for each side of the duplex print job were sent to separate printers, the user would be required to remove a sheet from the output of one printer, with one image on it, and take it to the other image output apparatus and load the sheet properly to have the remaining image printed on the other side. This method would obviously be much slower, require much more time on the user's part, be more prone to error and be tedious.

17. In accordance with claims 5 and 17, Barry discloses that when a jam or interrupt occurs during the output of the job, the control means redistribute all remaining pages to output-capable apparatuses (col. 18 lines 48-52).

18. In accordance with claims 6 and 18, Barry discloses that when a jam or interrupt occurs during the output of the job, the control means redistribute all remaining pages to output-capable apparatuses (col. 18 lines 48-52). Sumita discloses that if a first apparatus finishes printing, it is checked whether or not a second apparatus has more

than one image left to output, if so the remaining portion of the job is shared between the two devices to increase printing speed (solution portion of the abstract).

19. Therefore, if a detect error, as disclosed by Barry, has been eliminated, it would be obvious to allow that idle printer to print some of the remaining pages, as disclosed by Sumita.

20. In accordance with claim 12, Barry discloses printing distribution is effected by the colors in the image; in Barry's system, black and white printers are used to print the black and white images and color printers are used to print the color images (col. 10 lines 10-19).

21. In accordance with claim 14, Barry discloses that at least one image forming apparatus capable of outputting monochromatic images alone and at least one image forming apparatus capable of outputting monochromatic and color images; in Barry's system, each of the printers, all indicated by the reference sign 16, can be either black and white or color engines (col. 10 lines 34-38), and that the color engines can print in black and white (col. 16 lines 35-38).

22. Claims 4, 9-10, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry in view of Sumita in further view of Koana (2001/0048533).

23. In accordance with claims 4 and 16, Barry and Sumita do not disclose expressly that when a previous print job is being output by any of the output apparatuses, a new print job is distributed to output-capable output apparatuses, excluding said output apparatus outputting the previous print job.

24. Koana discloses that when a new job is to be printed in a system of multiple printers, the remaining time required to finish printing previous print jobs is determined (paragraph 0063), and the job is sent to the printer with that will print the new job in the least amount of time (paragraph 0072).

25. Barry, Sumita and Koana are combinable because they are from the same field of endeavor, namely distributing print jobs in a multiple printer printing system.

26. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to distribute a new print job in the apparatus of Barry and Sumita to output apparatuses in accordance with the progress of printing previous jobs in the output apparatuses of the system.

27. The motivation for doing so would have been to print jobs in the shortest possible time.

28. In accordance with claim 9, Koana discloses calculating the time required to complete the print job (paragraph 0070), and displaying the time to the user (paragraph 0073).

29. In accordance with claim 10, Koana discloses allowing the user to select one of the output apparatuses to perform the print job (paragraph 0055).

30. In accordance with claim 13, Koana discloses that when a new job is to be printed in a system of multiple printers, the remaining time required to finish printing previous print jobs is determined (paragraph 0063), and the job is sent to the printer with that will print the new job in the least amount of time (paragraph 0072). Barry

further discloses that color output apparatuses print slower in monochrome than do monochrome printers (col. 16 lines 35-38).

31. Therefore, it would be obvious to allocate images in accordance with the output speeds, as disclosed by Koana, in order to print the job as fast as possible.

32. Claims 7-8 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry in view of Sumita in further view of Glass (6,041,200).

33. In accordance with claims 7, 8, 19 and 20, In Barry's system, output pages are sorted in either collate mode or gather mode by the apparatus, thus not requiring sorting instruction (see figure 14). However, Barry discloses that when an error occurs and order is interrupted, the user is then provided with an output instructing the operator how to arrange the pages for pickup from the output bin (col. 18 lines 50-52).

34. However, Barry and Sumita do not disclose expressly that when every print job has been completed, the personal computer displays a print result, in which the number of pages and output destinations are associated.

35. Glass discloses that when a print job is completed a graphical display 220 is provided on and instruction sheet 160 for the user, which displays the ordering of the sheets within the job (col. 4 lines 23-26 and figure 2).

36. Barry, Sumita and Glass are combinable because they are from the same field of endeavor, namely distributing print jobs in a multiple printer printing system.

37. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to provide a display indicating the proper order and location of each sheet.

38. The motivation for doing so would have been to allow the user to quickly collate the finished print job.

Conclusion

39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The other art cited further reads on the independent claims.

Contact Information

40. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl R. Reitz whose telephone number is (703) 305-8696. The examiner can normally be reached on Monday-Friday 8:00-4:30.

41. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 305-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

42. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KRR

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